STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

The Citizens Utility Board and The Environmental Law And Policy Center	**:**	
	:	
Petition to Initiate Rulemaking With Notice and Comment for Approval of Certain Amendments to Illinois Administrative Code Parts 466 & 467 Concerning Interconnection Standards for Distributed Generation.	**:**	**14-0135**

PROPOSED FIRST NOTICE ORDER

March 4, 2015

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By the Commission

I. Introduction

On February 19, 2014, the Citizens Utility Board ("CUB") and the Environmental Law and Policy Center ("ELPC") filed a Verified Petition with the Illinois Commerce Commission ("Commission") to initiate a rulemaking proceeding to amend portions of Part 466 and Part 467 of the Commission's rules. CUB and ELPC seek to ensure that the interconnection process for distributed generation facilities promotes the investment in, and use of, distributed generation facilities. The Petitioners propose to align Illinois' rules with best practices across the country and the recent Small Generation Interconnection Procedures ("SGIP") update by the Federal Energy Regulatory Commission ("FERC").

A. Procedural History

The following Petitions to Intervene were granted by the Administrative Law Judge ("ALJ"): Interstate Renewable Energy Council, Inc. ("IREC"), Commonwealth Edison Company ("ComEd"), Illinois Competitive Energy Association ("ICEA"), the Illinois Power Agency ("IPA"), and Ameren Illinois Company d/b/a Ameren Illinois ("Ameren").

Pursuant to notice given in accordance with the law and the rules and regulations of the Commission, prehearing conferences were held before a duly authorized ALJ at the Commission's offices in Chicago, Illinois on the following dates: April 8, 2014, June 25, 2014, July 31, 2014, and October 7, 2014. Several workshops were also held.

Initial Comments were filed on August 22, 2014 by CUB/ELPC/IREC ("Proponents" or "Petitioners"). On September 12, 2014, Initial Comments were filed by Ameren, ComEd, and Staff. Reply Comments were filed by CUB/ELPC/IREC on September 29, 2014. Reply Comments were filed on November 6, 2014, by Ameren, ComEd, and Staff. On November 21, 2014, CUB/ELPC/IREC filed Surreply Comments.

B. Background

In Docket 06-0525, the Commission adopted Part 466, pursuant to Section 16-107.5(h) and Section 10-101 of the Public Utilities Act ("PUA" or "Act"), which states that:

> Within 120 days after the effective date of this amendatory Act of the 95th General Assembly, the Commission shall establish standards for net metering and, if the Commission has not already acted on its own initiative, standards for the interconnection of eligible renewable generating equipment to the utility system. The interconnection standards shall address any procedural barriers, delays, and administrative costs associated with the interconnection of customer-generation while ensuring the safety and reliability of the units and the electric utility system. The Commission shall consider the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547 and the issues of (i) reasonable and fair fees and costs, (ii) clear timelines for major milestones in the interconnection process, (iii) nondiscriminatory terms of agreement, and (iv) any best practices for interconnection of distributed generation.

220 ILCS 5/16-107.5(h). Part 466 governs the electric interconnection of distributed generation facilities. 83 Ill. Admin. Code §466.10. Part 466 applies to generation facilities operated in parallel with an electric public utility distribution company in Illinois whose nameplate capacity is equal to or less than 10 Megavolt Amperes ("MVA"), provided that the distributed generation facility is not subject to the interconnection requirements of either FERC or the applicable Regional Transmission Organization ("RTO").

In Docket 08-0481, the Commission adopted Part 467, which governs the electric interconnection of large distributed generation facilities. 83 Ill. Admin. Code §467.10. Part 467 was authorized by Section 16-107.5 and 10-101 of the PUA. 220 ILCS 5/16-107.5; 220 ILCS 5/10-101. Part 467 applies to any generation facility operated in parallel with an electric public utility distribution company in Illinois and whose nameplate capacity is greater than 10 MVA, provided that the distributed generation facility is not subject to the interconnection requirements of either FERC or the applicable RTO.

In 2005, FERC adopted the Small Generator Interconnection Procedures ("SGIP"), which are intended to serve as model rules for states. *See* FERC Order 2006 ("Standardization of Small Generator Interconnection Agreements and Procedures") (May 12, 2005). The Proponents state that the Commission's existing Part 466 and Part 467 are largely based on the FERC SGIP and IREC's model rules, tailored through the Commission's workshop process to meet the specific needs of Illinois stakeholders. In November 2013, FERC substantially revised its SGIP. FERC Order 792, 145 FERC ¶ 61,159. The revised SGIP includes many innovations to streamline distributed generation interconnection, including the creation of a pre-application report, adoption of new thresholds for participation in the expedited interconnection review process, and changes to the supplemental review process to allow a greater number of systems to proceed without full study and without compromising system safety, reliability, and power quality.

The current Part 466 rules contain three levels of expedited review: Level 1 applies to systems that are smaller than 10 kVA in nameplate capacity and meet certain technical screens, Level 2 applies to systems that are smaller than 2 MVA and meet similar technical screens, and Level 3 applies to systems under 10 MVA in nameplate capacity that do not export power to the grid. Systems that do not fall into these expedited review categories or fail to meet one or more of the associated technical screens must undergo a full utility study process under Level 4, which includes three different studies and therefore substantially more time and expense. Standard application forms and contracts that memorialize the interconnection agreement between self-generators and the utility are included as appendices to the Part 466 and Part 467 rules.

The Energy Infrastructure Modernization Act ("EIMA") requires that benefits from distributed generation accrue to customers of utilities participating in EIMA's formula rate structure as a result of implementing a Smart Grid Advanced Metering Infrastructure Deployment Plan ("AMI Plan"). 220 ILCS 5/16-108.6(a). "Smart Grid" is defined by law to mean investments and policies that together promote one or more of the following goals, including the "[i]dentification and lowering of unreasonable or unnecessary barriers to adoption of Smart Grid technologies, practices, services, and business models that support energy efficiency, demand-response, and distributed generation." 220 ILCS 5/16-108.6(a).

In Docket 12-0298, ELPC and CUB informed the Commission that updates to the Part 466 and Part 467 rules may be necessary in order to incorporate current best practices to accommodate higher penetrations of distributed generation and to achieve the customer benefits required by EIMA. In its Final Order, the Commission stated that the proper way to address the issues raised by CUB and ELPC was "through a petition for rulemaking pursuant to Section 200.210 of the Commission's rules." Docket 12-0298, Order at 50.

A discussion of the proposed amendments follows, with attached Appendices that reflect the amendments discussed herein. The rules in the attached Appendices have been renumbered to include additional sections and the discussion below refers to the new section numbers as contained in the attached Appendices. Future briefing should follow this numbering.

C. The Need for the Amendments

1. Proponents

The Proponents state that as the number of interconnections grow and the penetration of distributed generation on circuits increases, there is a need to ensure that the interconnection procedures in place are capable of handling these higher volumes efficiently. According to the Proponents, states using procedures similar to the current Illinois procedures have experienced significant study backlogs and increased costs as a result. Proponents assert that Illinois is likely to experience a much faster pace of distributed generation market growth in the near future due to the following national and local long-term trends: 1) the specific carve-outs for solar energy development and distributed generation in Illinois' Renewable Energy Portfolio Standard ("RPS") call for substantial new distributed solar development (see 20 ILCS § 3855/1-75); 2) the 2015 Illinois Power Agency ("IPA") Procurement Plan (issued on August 15, 2014) includes

plans for substantial distributed generation procurement in 2015 (IPA 2015 Draft Procurement Plan at 90-109); 3) state legislation allocates $30 million for solar procurement; much of this likely to be distributed solar as discussed in the accompanying IPA workshops (see Public Act 98-0672, adopting Section 1-56(i) of the Illinois Power Agency Act); 4) the U.S. Environmental Protection Agency's 111(d) Rule (also known as the "Clean Power Plan") implementation will also likely drive more renewable development; and 5) costs for distributed generation—especially wind and solar—continue to fall in Illinois and across Midwest.

The Proponents note that EIMA set forth the following policy objective: "[i]dentification and lowering of unreasonable or unnecessary barriers to adoption of Smart Grid technologies, practices, services, and business models that support energy efficiency, demand-response, and distributed generation." 220 ILCS 5/16-108.6(a). In an effort to meet this objective, the Proponents recommend that the Commission align the state's interconnection procedures with national and emerging regional best practices. Doing so provides consistency and ease of access to distributed generation project developers who often operate in multiple states. Limiting the administrative and regulatory burden for developers allows them to install projects and work with consumers in a streamlined fashion, bringing down administrative costs and minimizing inhibitory lag in the application review process.

2. ComEd

ComEd generally agrees with the Proponents that the Commission's rules pertaining to the interconnection process should be as user friendly as practical. Avoiding unnecessarily costly and time-consuming procedures without compromising safety and system reliability is a worthwhile objective.

ComEd states that the current Part 466 and 467 rules for connecting distributed generation facilities are working. ComEd has processed over 900 such applications. Of those, only 26 applications were processed under Lever 4. Of the applications processed under Level 4 review, just one application each was moved from Level 1 and Level 3, respectively, to Level 4, while three applications were moved from Level 2 to Level. All applicants were apparently satisfied with the response they received.

3. Ameren

Ameren does not see a demonstrable need for the rule changes, but has no objection to most of the proposed changes to Part 466 and no objection to the changes proposed to Part 467. Indeed, Ameren notes that it has not had any complaints or issues with the rules' application and none from those interested in the installation of distributed generation facilities.

Ameren states that the existing rules are very effective in supporting existing distributed generation applications. Even if applications rise as anticipated by Petitioners, Ameren argues that the existing rules would support the increase volume with perhaps some adjustment of staffing levels by the utilities.

Ameren points out that the carve-outs for new solar and distributed generation development in the Renewable Power Supply ("RPS") standards are subject to rate cap, can be procured from out of state facilities, and are targets to be met only if the total

amounts of renewable resources are still needing to be secured by the Illinois Power Agency ("IPA"). These factors, Ameren asserts, will temper the number of new in-state distributed generation facilities needed to fulfill the RPS obligations.

With respect to the U.S. EPA's Clean Power Plan, Ameren notes that even assuming quick resolution of court challenges, it is several years from its final form.

Ameren urges the Commission to reject certain portions of the rule as discussed below and to decline to adopt any proposal that would limit the ability of the Commission or utilities to apply costs to cost-causers.

Ameren also points out the voltage support that the grid provides to the effective operation of distributed generation facilities. Therefore, any modification made to the interconnection of distributed generators and electricity distribution systems should consider all aspects of interconnection and its effects on the continual stability of the distribution system.

4. Staff

Staff notes that the existing Part 466 has worked rather well, but it is unknown whether the existing Part 466 rules are capable of handling large scale investments in distributed generation. Staff states that it always interested in improving and streamlining the Commission's rules if necessary.

5. Commission Analysis and Conclusion

The Commission sees that the utilities and Staff find the existing rules to be effective, but are not opposed to improving the Commission's rules. The Commission also does not see the urgency for these amendments, but nevertheless agrees that the distributed generation interconnection process could be improved in several respects as proposed by the Proponents. Indeed when considered with FERC's Order 792 and the push for smart grid infrastructure improvement in Illinois, there is no harm in updating the Commission's rules. In addition, updating the Commission's rules is consistent with the statutory goal of ensuring that barriers to the interconnection of distributed generation be minimized. Also, the Commission must consider whether FERC's updated SGIP would represent a best practice for Illinois as required by Section 16-107.5(h) of the Act.

In agreeing that the rules should be amended, the Commission is still left with unanswered questions. An update should be provided on the various proceedings cited to be likely to cause an increase in distributed generation applications - for instance the EPA's Clean Power Plan and distributed generation issues at the IPA, etc. The utilities are asked to provide specifics regarding the number of distributed generation applications received each year since the adoption of the rules - how many at each level, are the number of applications increasing and at what pace. Any other information that will assist the Commission in making an informed decision should also be provided.

A discussion of the proposed amendments follows.

II. Section 466.20 Definition of Minor System Modifications - No Construction Screen

A. Petitioners

The Petitioners recommend that the Illinois rules be revised to remove the "no construction screens." According to Petitioners, these screens prevent applicants that require the construction of any upgrades from proceeding through expedited review under Levels 1, 2 or 3, even if such upgrades are minor and/or pose no technical concerns.

Petitioners explain that the "no-construction screen" refers to the screen in Levels 1, 2, and 3, which does not allow projects to receive expedited review if they would require construction of any facilities by the utility to accommodate the project. 83 Ill. Admin Code §§ 466.90(a)(5), (b)(5), (c)(1)(F), (c)(2)(E), 466.100(a)(5), 466.110(a)(10). Petitioners state that the screen is intended to provide the utilities with time to determine the extent of the construction needed on their own systems and a mechanism to estimate the cost of upgrades for which the applicant will be responsible. According to the Petitioners, the effect of the screen is that a project that passes all other screens may be required to pay for and undergo the full Level 4 study process even if there are no technical concerns warranting further system impacts review. Petitioners explain that a full Level 4 review could involve a feasibility study, a system impacts study, and a facilities study. Further, Petitioners state that even if some of the Level 4 studies can be voluntarily waived by mutual agreement of the utility and the applicant, the time required for moving over to Level 4, and the associated costs, are unwarranted.

The proposed amendments remove the no-construction screen and instead allow utilities additional time to provide a cost estimate along with an Interconnection Agreement when it determines that upgrades are necessary. 83 Ill. Admin. Code §§ 466.90(b)(5), 466.100(c), 466.110(b).

The Petitioners also propose to include a definition for "Minor System Modifications" in Section 466.20. Petitioners state that their proposal is based on IREC's Model Interconnection Procedures and as further informed by discussion held during the workshops.

Petitioners clarify that the intent of the "Minor System Modifications" definition is that any modifications between the service tap and the meter be considered minor and changes on the utility's side of the service tap will have to be below four hours of work and $1000 in materials to qualify as minor. They note that although ComEd states that it has not yet experienced modifications to the distribution system that would qualify for this definition, the Petitioners state that this may not be the case in the future. Petitioners also accept Staff's proposed changes.

For generators needing only interconnection facilities or Minor System Modifications, the Petitioners propose that utilities be given 15 business days to develop the cost estimate and provide the Interconnection Agreement.

For generators requiring more than Minor System Modifications, Petitioners propose that the utility be given 30 business days to develop the cost estimate and provide the Interconnection Agreement. Alternately, the utility could opt to conduct a Level 4 Facilities Study for these projects if necessary. In all cases, under the Petitioners'

proposal, the generator will have to agree to pay the costs associated with the upgrades identified in order to sign the Interconnection Agreement.

Moreover, in response to other parties' comments, the Petitioners now propose the same approach and timelines for Levels 1 to 3, which are tiered based on the size of the upgrade. They propose to remove the No Construction screen for all three levels and to impose the following timeframes when an applicant passes the technical screens: 1) projects requiring no upgrades will receive an Interconnection Agreement in five days; 2) projects requiring Minor System Modifications will be given a good faith cost estimate within 15 days; and 3) for projects requiring more than minor upgrades, the utility will conduct a facilities study using the existing procedures.

Petitioners state that their proposed timelines are reasonable and consistent with timelines contained in other parts of the interconnection procedures in Illinois, as well as timelines used in other states. The Petitioners recognize that complying with the timelines may require the utilities to modify their internal processes, the Petitioners assert that the changes should ultimately benefit the utility by freeing up staff time for other tasks. Likewise, Petitioners state that the increased efficiency should benefit other ratepayers, regardless of whether or not they seek to interconnect distributed generation systems.

B. ComEd

ComEd proposes an alternate definition for "Minor System Modifications," arguing that the Proponents' definition would likely result in all applications requiring utility construction failing to qualify for the Minor System Modifications definition regardless of potential impact on the grid. ComEd proposes that it be changed to mean "modifications to an EDC's electric distribution system located between the service tap on the distribution circuit and the meter serving the interconnection customer." ComEd states that, in its experience, any work attributable to a distributed generation application would exceed the 4 hours/$1000 in materials screen.

If the Commission accepts the proposal to insert a definition for Minor System Modifications, ComEd also recommends that the word "minor" in the currently effective Section 466.100(f) be deleted. Use of the phrase "minor modification" while also defining the term Minor System Modifications is repetitive and confusing.

With respect to the proposal to eliminate the no construction screen, ComEd does not oppose this for Level 1 facilities because they are sufficiently small that it is unlikely for them to have a substantial impact on ComEd's grid. For Level 2 and Level 3, however, ComEd proposes to retain the "no utility construction" screen, with an appropriate Minor System Modifications exception.

Although ComEd does not oppose eliminating the "no construction" screen for Level 1 facilities, ComEd in its reply comments now states that it requests that the rule require Level 1 applicants to sign the interconnection agreement contained in Appendix D (the contract for Levels 2 to 4) to assure that applicants agree to bear the costs of utility construction.

ComEd also does not object to incorporating into the Level 2 and Level 3 "no construction" screens exceptions for Minor System Modifications as proposed by the

Petitioners. ComEd explains that generators applying under Level 2 or 3 are larger and are likely to have a substantial impact on ComEd's grid. If modifications that fall outside the definition of Minor System Modifications are required, ComEd will need to spend considerable resources to find solutions that will protect the grid and not impact the reliability of other customers. Processing applications that require construction in Level 2 or 3 as proposed instead of properly placing them under Level 4 review would cause ComEd to incur additional costs not directly paid by applicants and correspondingly decrease the resources ComEd has available to address the concerns of other customers.

In addition, ComEd opposes the Petitioners' proposal that requires the utility to conduct an interconnection facilities study under Section 466.130(e)(3) (Level 4) if more than Minor System Modifications are required. *See* proposed 100(b)(5)(C), 466.110(c)(3) and 466.120(b)(3). In most circumstances, a cost estimate and construction schedule can be determined without requiring an interconnection facilities study and without requiring the customer to fund an interconnection study. In other circumstances, ComEd will need the flexibility to perform necessary studies permitted under Level 4 review, not limited to the interconnection facilities study, in order to find solutions that will protect the grid and not impact the reliability of other customers.

In situations where more than Minor System Modifications are required, ComEd recommends that the Commission adopt language requiring the applicant to notify the utility that the applicant intends to continue the application procedure before the utility spends time preparing the cost estimate and construction schedule. ComEd further recommends that the response time be set instead at 45 business days after receipt of the notification from the applicant. ComEd explains the steps typically involved in the review process: 1) deposit application fee and set up internal charging codeblock (5 days); 2) assign engineering and project management resources through the service request process (5 days); 3) field visits and develop basic engineering scope and relay requirements (10 days); 4) develop a detailed "good faith" cost estimate and construction schedule (10 days); and 5) finalize scope, estimate and obtain management approval. ComEd notes that, therefore, at a minimum 35 days is requires, but allowing for 45 provides ComEd a reasonable buffer for compliance.

Additionally, because there is no interconnection system impact system study performed prior to the interconnection facilities study, ComEd proposes that the phrase "after completion of the interconnection system impact study" in Section 466.130(e)(3)(A) be replaced with "after receipt of the applicant's election of funding such study."

ComEd does not oppose the Petitioners' proposal to impose a 5 business day deadline for the utility to provide the applicant with an interconnection agreement where no construction is required to interconnect the applicant's project.

ComEd does, however, oppose the 15 business day deadline for applications that entail Minor System Modifications because it is unrealistic and instead recommends that the response time be set at 30 business days after receipt of the application. ComEd explains that the response must include an interconnection agreement along with a good faith cost estimate and a construction schedule. According to ComEd, a requirement of 15 business days would adversely impact other customers because ComEd's compliance

with this proposal would come at the expense of other customers. ComEd notes that its other customers already bear some portion of the costs that are not directly paid for by applicants because the costs associated with processing each application currently exceeds the fees paid.

ComEd notes that as of the date of its Initial Comments, it had received and processed approximately 920 applications, only 26 of which were subjected to Level 4 review. Of the applications processed under Level 4 review, just one application each was moved from Level 1 and Level 3, respectively, to Level 4, while three applications were moved from Level 2 to Level 4. All applicants were apparently satisfied with the response they received.

C. Ameren

Ameren states that currently, the Part 466 rules indicate that if any utility construction work is required, then an Expedited Review will not be available to that specific applicant. Proponents' proposal to remove the "no construction screens" will result in projects not being properly reviewed. Ameren argues that if the utilities are left without the ability to properly review a project prior to its operation, apply the appropriate technical standards and allocate costs to the appropriate parties, utilities will be forced to make required system repairs or upgrades after the fact. According to Ameren, the costs associated with those repairs and upgrades will be applied to its load customers rather than assigned to the distributed generation owner.

Thus, Ameren opposes the Proponents' proposed change. As an alternative, Ameren suggests maintaining the "No construction" language in the Expedited Review criteria for Level 1 through Level 3 facilities and adding the "Minor System Modifications" language proposed by the Petitioners. Ameren states that this will allow more projects to qualify for the Expedited Review process and properly excludes from fast-track consideration only those DG projects that require study or construction on that portion of the distribution system beyond the service tap.

In response to Petitioners' statements that the proposed amendments are designed to avoid unwarranted Level 4 review, Ameren states that utilities have no incentive to conduct arbitrary studies and that Level 4 studies are need to ensure the utilities completely understand the impact of a DG facility and ensure the safe and reliable operation of the distribution system. Ameren states that the proposed amendment replace the existing technical standards with review standards that essentially ensure the approval of DG applications without the utility being able to review the impact of the facility prior to construction. In addition, this proposal would result in the shifting of costs for any construction associated with the DG installation to rate-paying customers.

D. Staff

In its Reply Comments, Staff states that it does not object to this provision. Staff explains that the screens in Level 1, Level 2, and Level 3 are intended to "screen out" DG projects that could negatively impact the EDC's system. Staff asserts that the EDC's review of a project using these screens is an abbreviated form of the feasibility and impact study described under a Level 4 review. If significant construction (beyond minor system modifications) is necessary, and the project still passes the screens, then it appears to

Staff to be reasonable that the EDC and applicant follow the Level 4 facilities study process.

E. Commission Analysis and Conclusion

The Commission finds it appropriate to include a definition of Minor System Modifications and adopts the following definition for purposes of this First Notice Order:

> "Minor System Modifications" means modifications to an EDC's Electric Distribution System located between the service tap on the distribution circuit and the meter serving the Interconnection Customer, or other minor system changes that the EDC estimates will entail less than four hours of work and $1000 in materials.

The Commission agrees with Proponents that modifications required between the service tap on the distribution circuit and the meter should qualify as Minor System Modifications as would any modification that would entail less than four hours of work and $1000 of materials. There does not seem to be any serious dispute regarding this definition, rather whether any work would ever require less than $1000 and 4 hours of work. The Commission agrees with Proponents that the definition should include any work between the service tap on the distribution circuit and the meter serving the interconnection customer. In the event there is other work that would actually qualify as Minor System Modifications because it is under $1000 and 4 hours of work, this should also be included in the definition.

The inclusion of a definition of Minor System Modifications works in conjunction with the proposal to remove the No Construction Screen. The Commission agrees that for Levels 1, 2, and 3, these two proposals work well together because rather than only allowing applicants that do not require construction to be eligible for expedited review, as rewritten applicants that require only minor system modifications can still be eligible for expedited review. It is a slightly longer timeframe and they have to pay for the modifications, but a full Level 4 review will not be required.

In addition, if more than Minor System Modifications are required, the Commission adopts ComEd's proposed process. ComEd proposes that a utility should have the option of providing a good faith estimate and construction schedule without doing a full interconnection facilities study. The Petitioners would always require the interconnection facilities study. ComEd's proposal makes sense, because there is no purpose in requiring the interconnection facilities study if it is not necessary. The Petitioners' proposal adds cost and time to the application process and seems to run counter to its overall proposal to ease the application process. ComEd's general proposal is adopted, but the language is modified. In particular ComEd's language is modified to clarify that a customer does not agree to fund the interconnection facilities study until it receives the report required in 130(e)(3)(A). It is also necessary to modify 130(e)(3)(A) to allow a customer to reach the interconnection facilities study without first performing the other Level 4 studies.

Further, the Commission adopts ComEd's timeframes. With the anticipated increase in applicants, the utilities must have time to fully review all applications. Also, as pointed out by Ameren, utility costs that are incurred to review distributed generation

applications are borne by other ratepayers. ComEd's proposed timeframes are not unreasonable and are included in the attached appendix. Also, although ComEd and Ameren are the only participating utilities, as written the rules would apply to any electric utility subject to the jurisdiction of the Commission.

The purpose of ComEd's language that requires the applicant to inform the EDC that the applicant elects to continue the application is unclear. Is it common for applicants to stop the process without informing the utility? Is it a huge cost to provide a cost estimate and construction schedule? ComEd also does not explain why its proposal does not include a process for more than Minor System Modifications for Level 3. The Commission finds that a similar process for Levels 1, 2, and 3 is appropriate and easily understood.

III. Section 466.30 Waiver

A. Petitioners

The Petitioners note that Part 467 contains a waiver provision that allows the Commission, on application of a utility or interconnection applicant, or on its own motion, to grant a temporary or permanent waiver from the interconnection procedures. The burden of proof for establishing the waiver lies on the party seeking it. 83 Ill. Admin. Code § 467.30. Petitioners assert that Part 466 should include a waiver provision similar to the provision in Part 467, which allows an appropriate degree of flexibility for the utilities and the Commission.

B. ComEd

ComEd does not oppose the addition of a waiver provision to Part 466 and states that the waiver provision in Part 467 has been little used, but that the availability of such a provision may provide a useful relief valve for unanticipated circumstances.

C. Staff

Staff proposes that a waiver provision be added to Part 466. Staff proposes language based on Section 13-513 of the Act. In Staff's view, a primary reason for a waiver provision is due to the unknown, or unknowable. Absent a waiver provision, well intentioned rules could result in an injustice due to unforeseen circumstances.

D. Commission Analysis and Conclusion

The Commission agrees with Staff and Proponent that a waiver provision should be incorporated in Part 466, similar to that included in Part 467. Inclusion of a waiver provision is uncontested and will allow flexibility in the interconnection process.

IV. Section 466.50 Pre-Application Report

A. Proponents

The proposed amendment to include a Pre-Application Report is designed to make the process for both smaller and larger generators more transparent and efficient. The Pre-Application Report provides potential interconnection applicants the opportunity to request system information about a particular point of interconnection. The Proponents' proposed amendment follows FERC's Pre-Application Report process approved in Order 792, SGIP § 1.2. – 1.2.3. The proposed Pre-Application Report includes specific

information for inclusion in a Pre-Application Report request by a generator, as well as specific information for the utility to provide in return.

The Proponents state that when a utility provides access to relevant system information, developers can pre-screen locations that offer better system conditions and reduce the number of applications submitted for projects that are later withdrawn because they are prohibitively expensive. From the utility's perspective, the Proponents assert that the Pre-Application Report reduces the number of applications they have to process and relieves some of the burden on their resources.

The proposal states that the utility need only include existing, readily available data. The Petitioners' proposed amendment requires that the utility provide the Pre-Application Report within 20 days of receiving the request and the payment of the $300 fee.

In reply comments, the Petitioners state that they accept Staff's proposed changes.

B. ComEd

ComEd does not oppose this revision. ComEd states that this sort of report would likely provide beneficial information for site selection without imposing undue costs on either ComEd or its customers.

ComEd changes "and" to "or" in Section 466.50(b) (1)-(4). ComEd states that reporting substation bus, transformer, and feeder capacity is burdensome, unnecessary, and not consistent with the model document used for interconnecting wholesale distributed generation.

C. Staff

Staff proposes many non-substantive changes to this section as well as several substantive changes. In particular, Staff clarifies that subsection (a)(7) is a request for a pre-application report, not for utility service. In subsection (b), Staff proposes to eliminate the term "bank" because it is an undefined technical term and replace it with "substation transformer." Also in subsection (v), Staff proposes to eliminate the reference to "circuit" because it could be referring to more than just a circuit.

D. Commission Analysis and Conclusion

The Commission agrees that the Pre-Application Report process will improve the interconnection process and, thus, is adopted. It appears to be generally accepted among participants in this proceeding that the Pre-Application Report will improve the process.

The Commission has altered the proposed language slightly and incorporated changes proposed by ComEd as well. Also, the proposed Part 466.50(b)(8) refers to Part 466.100(f), but it appears that it should refer to Part 466.110(f).

V. Part 466.60

The Commission rewrites Part 466.60(b) as follows:

> EDCs may charge a fee by level that applicants must remit in order to process an interconnection request. ~~EDCs shall~~

~~specify the fee by level that the applicant shall remit to process the interconnection request.~~ The fee shall be specified in the interconnection request forms. ~~EDCs may charge a fee by level that applicants must remit in order to process an interconnection request.~~ The EDCs shall not charge more than the fees specified in the interconnection request application forms (Appendices A and D).

VI. Part 466.70

A. Section 466.70(h) External Disconnect Switch

1. Petitioners

Illinois' current interconnection rules require that an interconnecting generating facility install an external disconnect switch ("EDS") that is clearly marked. 83 Ill. Admin. Code § 466.60(h), 467.60(h). Petitioners explain that an EDS allows utility employees to manually disconnect a customer-owned generator from the electricity grid. In instances of a power outage, there is a possibility that a grid-tied system may continue generating electricity and export it to the grid, putting utility workers at risk of encountering energized lines. According to Petitioners, if a generating facility uses a certified inverter that prevents it from exporting power when the grid is de-energized, then many states have found they can waive the requirement or prohibit utilities from requiring an EDS for small generators without risking the safety of line workers or causing system impacts.

Illinois' rules require that for systems to be eligible for Level 1 review, generators must employ lab-certified equipment, including specifically UL 1741 certified inverters. 83 Ill. Admin. Code § 466.70(f)(2). Petitioners state that, therefore, all inverter-based generators already have automatic shut-off capabilities integrated into their systems and in the event the grid goes down, these modern inverters stop power flow to the grid automatically. The Petitioners argue that as such, the EDS requirement for these systems is unnecessary.

Petitioners also state that the EDS requirement is impractical. Specifically, going to the location of a generator and manually disconnecting it, tagging the location, and later returning to reconnect the facility is a labor-intensive prospect. Also, according to Petitioners, utility workers have other means available to them to verify that lines are no longer energized.

In reply comments, Petitioners respond to Ameren's argument an EDS is required to comply with OSHA regulations and the National Electric Code, by referencing reports by NREL and the Solar America Board of Codes and Standards. Proponents note that the NEC applies to a customer's premises behind the utility meter and is not under the control of the electric utility. In response to Ameren's comments that an EDS is not cost prohibitive, Proponents assert that any cost is unacceptable if there is no evidence of its necessity. Petitioners suggest that an alternative could be to allow EDCs to require an EDS, but only if the EDC pays.

In their Surreply Comments, the Petitioners state that although Staff's proposal is an improvement over the current rules, they continue to recommend that the requirement for an external disconnect switch be removed completely based on the technical record.

They further state that their proposal is based upon the current practices of the nation's utilities with the most experience integrating high volumes of distributed generation.

2. ComEd

ComEd opposes this proposed amendment. ComEd states that the existing language provides the utility with flexibility to require an isolation device on inverter-based generation that is <25kW. The proposed change would preclude utilities from requiring an isolating device in those specific instances where that equipment is necessary to protect the safety of the utility's employees or the reliability of the distribution system.

In response to Petitioners' alternate proposal to require utilities to bear the burden of costs associated with isolating devices for systems smaller than 25kW. ComEd states that it does not require devices except where necessary to ensure safety and reliability on the electrical grid. ComEd notes that any costs that are not borne by the interconnection applicant will ultimately fall on other customers.

3. Ameren

Ameren opposes this change because it would eliminate flexibility and preclude utilities from requiring an isolating device in those instances where it is necessary to protect the safety of the utility's employees or the reliability of the distribution system. Ameren states that injuries can occur even when working on small facilities. Also, according to Ameren, the proposal is contrary to OSHA regulations which require isolating all known energy sources. If the Commission adopts this proposal, Ameren states the Commission must excuse Ameren from complying with OSHA regulations. Ameren states that the proposal is also contrary to the National Electric Code, which requires that parallel generators be equipped with a disconnect switch.

Ameren further states that these switches are not cost prohibitive. For example, for a typical 10-25 KW DG unit, the installation costs ranges from $25,000-$40,000; the installed cost of the disconnect switch for those units is $500.

Ameren states that the Petitioners' position is baseless and contrary to utility practice. In response to Petitioners' proposal to require a utility to install the EDS at its own expense, this simply shifts the responsibility for this protective equipment away from the distributed generation owner and onto the utility's load customers.

4. Staff

Staff recommends that, with a small change, the existing language in the rule should remain, because Staff is concerned about a blanket ban on EDCs requiring isolating devices for inverter-based systems below 25kW. Staff notes that a visible disconnect switch can protect EDC workers if a distributed generation owner modifies the components of the distributed generation facility over time, which can inadvertently affect its behavior. Staff states that the EDC is responsible for providing safe and reliable service to all of its customers, and if it believes a distributed generation facility could jeopardize this responsibility, the EDC must be able to isolate that distributed generation facility. Staff is sensitive to the Petitioners' concerns about unnecessary costs, but an EDC's need to isolate a distributed generation facility for safety and reliability reasons should not be prohibited by rule.

Staff proposes an alternative, which would specify that the EDC should require an external disconnect switch for secondary connections only where another satisfactory means to isolate, such as a self-contained meter, are unavailable.

5. Commission Analysis and Conclusion

The current rule says that, "EDCs may require that distributed generation facilities have the capability to be isolated from the EDC." In other words, it is at the discretion of the utility to decide whether to require an external disconnect switch which disconnects the distributed generation facility from the grid. The Commission has not been shown that this is being unnecessarily required of distributed generation applicants. Indeed, there is no evidence regarding the use of external disconnect switches in Illinois. The Commission is troubled by a proposal that bans a utility from requiring something that may be necessary for safety reasons. If a utility believes an external disconnect switch is necessary, the Commission is reluctant to remove that option.

As stated, there is no evidence that external disconnect switches are being needlessly required. ComEd and Ameren should provide the Commission information regarding their practices. How often has each utility required a distributed generation applicant to install an external disconnect switch - for systems under 25kW and for systems under 10kW? When an EDS has been required, why was the EDS required? What are the costs to install a switch for applicants for systems under 25kW and under 10KW? How often has an EDS been used or accessed by ComEd or Ameren? In what circumstances - for maintenance or in emergencies? Any other information that would help the Commission to make an informed decision should also be provided by utilities, Proponents and Staff.

Staff's proposal, in reply comments, is not explained and for that reason cannot be adopted.

Perhaps a middle ground would be appropriate. For instance, could this requirement be waived for systems under 10kW? Or should the utilities' discretion be limited to safety and reliability reasons? Based on the record presented, the Commission finds that Part 466.70(h) should be amended as follows:

> To protect the safety of the EDC's employees or the reliability of the distribution system, EDCs may require that distributed generation facilities have the capability to be isolated from the EDC.

The Commission finds this language to address the concerns of utilities regarding the need for external disconnect switches in some instances for safety and reliability issues, but also limits the situations in which a utility may impose that requirement.

B. Section 466.70(i) No Additional Requirements

1. Petitioners

The Petitioners propose that the following be added to Part 466:

> An EDC shall not charge an Applicant any fee or require additional equipment, insurance, or any other controls or tests

to obtain approval to interconnect that are not authorized by the provisions in this Part 466.

The Petitioners, in their Reply Comments, state that the purpose of having standardized interconnection procedures is to provide transparent and non-discriminatory access to the electrical system while also protecting system safety and reliability. Petitioners assert that to the extent a utility wishes to require additional measures beyond those currently allowed by the rules, the utility should seek Commission approval. Petitioners state that Ameren's argument make a strong case for the need for protection from additional utility requirements.

In their Surreply Comments, the Petitioners agree to drop this provision from the rules. They urge the Commission, however, to make clear that the utilities do not have unlimited discretion to require tests and additional equipment that are outside the scope of the rules.

2. ComEd

ComEd opposes this language because it is too broad in nature and scope and should not be included because it does not allow flexibility for the EDC to require additional controls, tests or equipment that may be necessary to ensure the safe and reliable operation of the local distribution system. The ability to require nonstandard features in appropriate situations is an important aspect of the current rules and ComEd maintains that it should be retained.

ComEd notes that under the current rule over 900 applications have been approved without significant controversy.

3. Ameren

Ameren opposes this provision stating that, while the level of DG installation in Ameren's service area remains limited, to excuse forever the possibility of additional equipment makes no sense. It would also be impractical to require a utility to seek permission from the Commission each time a non-specified piece of equipment needed to support a DG installation. Also, Ameren argues that should additional equipment be necessary, the DG customer should pay that cost.

Ameren states that the Petitioners' proposed standardized approach which only benefits the DG applicants to the potential detriment of the utilities, highlights the Petitioners' lack of a practical understanding of the distribution system.

4. Staff

In response to the proposed language, Staff states that Section 466.90, 466.100 and 466.110 of the current rule each already contain language very similar to the language that is proposed (*i.e.*, Section 466.110 states: "An EDC may not impose additional requirements for Level 2 reviews that are not specifically authorized under this Section unless the applicant agrees"). One of the purposes of Part 466, according to Staff, is to make the responsibilities and cost obligations of the parties clearer. Staff believes that the current rule effectively accomplishes this. Staff is unaware of any disputes involving an EDC imposing unreasonable requirements on an applicant. Staff asserts

that the Petitioners' concerns are already largely addressed within the current rule and, thus, the proposed additional subsection (i) is not warranted.

5. Commission Analysis and Conclusion

The Proponents have withdrawn this proposed amendment. It is not included in the attached Appendix.

C. Part 466.70(m), (n) and (o) Electronic submittal

1. Petitioners

For both larger and smaller generators, the Petitioners propose to include improvements to the procedures to encourage easier submittal of interconnection applications for customers, easier review by utilities, and more transparent provision of interconnection-related information. These proposals include: 1) allowing interconnection applications to be submitted through a utility's website; 2) inclusion of a page on utilities' websites dedicated to interconnection procedures that, at a minimum, includes the procedures and their attachments in an electronically searchable format, the interconnection application forms in a format that allows for electronic entry of data, the interconnection agreements, and the point of contact for submission of interconnection requests; and 3) allowing electronic signatures to be used for interconnection applications.

Petitioners accept Staff's proposed changes

2. ComEd

ComEd is generally supportive of the proposed additions to both Part 466 and 467 which would authorize electronic exchanges of information, electronic submittal of applications and electric signatures. With respect to Part 466.70(m) ComEd would revise the proposed language to read: "allows interconnection applications to be submitted through the EDC's website or via another website a link to which is provided on the EDC's website." ComEd states that the remaining changes codify requirements that ComEd already meets, but that ComEd opposes overly prescriptive detail such as the proposal's being written into Commission rules.

In its reply comments, ComEd states that it does not oppose the revision.

3. Staff

Staff proposed wording changes the proposed amendments.

4. Commission Analysis and Conclusion

There does not appear to be controversy over the proposed requirements. The Commission finds it appropriate to include these requirements in the rules because the amendments will ensure that the application process is improved.

VII. Part 466.90 Determining the Review Level

A. Part 466.90(a) Increasing the Level 1 Size Limit to 25 kW

1. Petitioners

Petitioners explain that the Level 1 review process is the most basic of the four levels of review and is intended for inverter-based generators, such as solar PV generators, which are unlikely to trigger adverse system impacts or upgrades. Such generators require inverters to convert the direct-current ("DC") power they produce to alternating-current ("AC") power for use by the customer or utility. Petitioners state that inverter-based equipment has a lower likelihood of causing such impacts because it can quickly disconnect when a disturbance occurs. Level 1 provides for rigorous technical screens similar to the Level 2 screens, but with faster timeframes and lower costs and the ability to submit a relatively short, combined application and interconnection agreement. Petitioners propose to increase the size eligibility limit of Level 1 review, in order to allow more, small, inverter-based systems, including small commercial systems to take advantage of the benefits. They propose increasing it to 25 kilowatts ("kW"), up from the current 10 kilovolt-ampere ("kVA").

2. ComEd

ComEd does not oppose this change and anticipates that it will have no substantial adverse impact on the reliability of the ComEd distribution system.

3. Commission Analysis and Conclusion

No party has indicated that they oppose this change. The Commission finds it to reasonable and it is incorporated into the attached Appendix.

B. Part 466.90(b) Refining Level 2 Size Limit by Incorporating a Table

1. Petitioners

Petitioners state that, similar to the proposal to increase the Level 1 size eligibility, the proposal for Level 2 would refine and ultimately expand Level 2 eligibility and take into account the increasing demand for access to expedited interconnection procedures for small generators in Illinois. 83 Ill. Admin. Code §§ 466.90(b). The proposal recognizes that requiring a full Level 4 study for the expected higher volumes of interconnection applications is neither necessary nor realistic. Petitioners argue that, with their approach, cost savings can be extended to more projects with the right technical parameters. According to Petitioners, FERC has recognized that the proposed size table approach is a constructive method for achieving these goals, while balancing the need for system safety and realistic customer expectations.

The Proponents propose to include a two column table that will enable interconnection applicants to more easily determine their eligibility for Level 2 review, while still utilizing technically valid limits. The Petitioners' proposed table only applies to inverter based systems and eligibility varies based on the line voltage, the size of the generator and the location of the Point of Interconnection. The proposed table shows that the Level 2 process would only be available to projects connecting to lines at or below 69 KV. If the line voltage is greater than 69 kV, projects are ineligible for Level 2 review,

regardless of size. Also, synchronous and induction machines must be no larger than 2MW to be eligible for Level 2 review.

In their Reply Comments, the Petitioners note that no party opposes the use of a table, but ComEd proposes that the threshold for the > 5kV and >15 kV category for inverter-based projects should be set at 2 MW because the 3MW limit would exceed the feeder rating that ComEd usually applies. Petitioners state that ComEd does not explain which of the technical screens would necessarily be violated for systems between 2 and 3 MW. Further, Petitioners state that while it may be less likely that systems above 2 MW will pass the screens, there are likely some circuits where a system above 3 MW, particularly if located near the substation, could pass the technical screens. Petitioners note that the FERC rules reflect that and were evaluated closely and deemed acceptable by many of the nation's utilities and Sandia National Laboratories. FERC Order 792 at ¶¶ 96, 83, and 102-103. According to Petitioners, ComEd does not argue that there is a risk that the technical screens will not identify those projects requiring a more rigorous impact study and, thus, it is appropriate to allow generators up to 30 MW the opportunity to utilize the significantly faster and more cost efficient Level 2 process.

The Petitioners have accepted Staff's proposed changes.

In their surreply comments, the Petitioners reiterate that their primary proposal is for the Commission to adopt this table:

Level 2 Eligibility for Inverter-Based Systems	
Line Voltage	Level 2 Eligibility
< 5 kV	≦ 500 kW
≧ 5 kV and < 15 kV	≦ 3 MW
≥ 15 kV and < 30 kV	≤ 4 MW
≧ 30 kV and ≦ 69 kV	≦ 5 MW

The Petitioners' secondary proposal is for the Commission to adopt FERC's table for fast track eligibility, as contained the following table:

Fast Track Eligibility for Inverter-Based Systems		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on a Mainline and ≤ 2.5 Electrical Circuit Miles from Substation
< 5 kV	≤ 500 kW	≤ 500 kW
≥ 5 kV and ≤ 15 kV	≦ 2 MW	≦ 3 MW
≥ 15 kV and ≤ 30 kV	≦ 3 MW	≦ 4 MW
≥ 30 kV and ≦ 69 kV	≦ 4 MW	≦ 5 MW

In their Surreply Comments, the Petitioners note Ameren's objection that the third column has no meaningful impact on distributed generation at the distribution level because some circuits in Illinois may be designed for multiple sourced feeds. Petitioners disagree with Ameren and state that because most distribution-level lines are radial lines the technical literature demonstrates that the distance from the substation can be a significant factor in the potential impact of a project on the system.

Further, Petitioners state that projects that connect to a circuit designed for multiple sourced feeds would undergo Level 3 review, which addresses area networks, or else enter the Level 4 study process. Petitioners state that Level 2 review is expressly intended for projects interconnecting to radial distribution circuits, as stated in the Proposed Rules at Part 466.90(b)(4).

2. ComEd

ComEd does not object to utilizing a table for determining eligibility for Level 2 review, but disagrees with setting 3 MW as the maximum nameplate capacity of inverter-based generators eligible for Level 2 expedited review connecting to a line with voltage between 5 to 15 kV. ComEd proposes setting the value at 2MW.

ComEd notes that FERC set the level at 2MW for the 5kV to 15kV voltage band, but Proponents set the level at 3MW. ComEd also states that setting the threshold at 3 MW would likely allow some larger scale inverter applicants to qualify for Level 2 review when in reality a more detailed engineering analysis and review will ultimately be required before their project can be approved, resulting in dissatisfied customers who may feel they were misled into undergoing Level 2 review. According to ComEd, FERC Order 792 generally sets the cut-off level at 2MW except when the inverter-based system is ≤ 2.5 miles from the substation where the FERC endorsed cut-off is 3MW.

ComEd states that for the 5kV to 15kV voltage band, using a typical minimum feeder load of 25% of peak and maximum typical feeder capability of 8MW, only 2MW of generation can be accommodated on this feeder. Feeders with lower peak load would have an even lower limit to accept generation. Setting the cut-off level at <3MW in this

scenario, would mean that the 3MW system would fail the 100% of the minimum feeder load screen proposed by the Petitioners (and opposed by ComEd).

According to ComEd the 2MW value represents approximately 30% of the ComEd feeder rating, which is still slightly above, but at least somewhat in line with, ComEd's established design and engineering practice. ComEd states that such ratios are typically between 15% and 25%. A cut-off level of 3MW for the 5kV to 15kV voltage band comes to almost 38%, which is twice the level for which ComEd typically designs it system. ComEd avers that this underscores the likelihood that applicants with 2 to 3 MW inverter projects are likely to require Level 4 review before their projects can be approved, to ensure the safe and reliable operation of the area electric power distribution system.

3. Ameren

Ameren explains that the 3-column table is from the FERC SGIP and the column in the table regarding distance of the distributed generation facility to the substation has relevance for radial lines over which FERC has jurisdiction. At the distribution level, however, Ameren states that the distance criteria has no meaningful impact on distributed generation, particularly in Illinois where an increasing number of distribution circuits are designed for multiple sourced feeds. The multiple-sourced feed design in Illinois results in distributed generation facilities being simultaneously located at different distances from the different substations feeding the circuit.

Because Ameren currently utilizes, and is expanding, the multiple-sourced feed design on its distribution system, it does not object to the inclusion of the Petitioners' 2-column table. Ameren states that incorporating the proposed distance criteria into the table diminishes its clarity and usefulness.

4. Staff

Staff proposes to move certain language in subsection (b)(2) to below the table containing Level 2 Eligibility for Inverter-Based Systems.

Staff agrees with the Petitioners that the increase from 2MW to 3MW for the upper limit of Level 2 review is appropriate.

5. Commission Analysis and Conclusion

The Commission agrees with Proponents that a table based approach is appropriate for determining Level 2 eligibility. The Proponents' alternate proposal to use the table adopted by FERC is approved because it addresses the additional relevant condition of distance from the substation. Adopting this table will allow more distributed generation facilities to be eligible for Level 2 review, but importantly the distributed generation facilities must still satisfy the safety and reliability screens prior to being approved. This approach will improve the process for interconnecting distributed generation facilities.

Ameren's objection that it does not have many radial circuits, when considered with the Proponents' response that multiple sourced circuits would be subject to Level 3 or 4 review, is unexplained. Part 466.90(b)(5) states that Level 2 review applies to radial distribution circuits or spot networks limited to serving one customer. If the rule will not

apply to Ameren's network, Ameren's concern is puzzling. Further explanation of this is necessary.

ComEd's objection appears to be that the two column table does not take into account the distance from the substation. ComEd, however, does not make clear whether the 3 column table satisfies its concerns. Also, ComEd objects that 3MW systems would be more likely to fail the safety and reliability screens included in a Level 2 review. The Commission sees this objection to show that the screens would work appropriately, but at the same time, this amendment would allow more applicants to be treated expeditiously.

Staff appears to not object to the Proponents' table based approach and states that increasing from 2MW to 3MW is appropriate, however, no explanation for this position is offered. Staff, Ameren and ComEd positions on this issue lack full explanations.

In Appendix C, the Proponents and ComEd both have a revision under the heading, "Requested Procedure Under Which to Evaluate Interconnection Request." In the section for Level 2, language is added that says, "not exceeding the specifications in Section 466.90(b)(6)." There does not appear to be a Section 466.90(b)(6) in the new rules and there are no specifications contained in Section 466.90(b)(6) of the old rule, so this is unclear.

VIII. Queue position

A. Petitioners

The Petitioners' proposed rule includes a provision within the Level 1 review process that allows an applicant who fails the Level 1 review screens to keep her queue position so long as she makes a new interconnection request under the study process within 15 days. 83 Ill. Admin. Code § 466.100(b)(7). This proposed provision is consistent with existing provisions within Levels 2 and 3. 83 Ill. Admin. Code §§ 466.110(g), 466.120(a)(5)(B), 466.120(e).

In reply comments, Petitioners note that all parties appear unopposed to allowing projects that fail Level 1 review to retain their queue position so long as they apply within 15 days of notification that the interconnection request has been denied.

B. ComEd

ComEd does not oppose this change and states that currently it does not assign a new queue position in this circumstance.

C. Commission Analysis and Conclusion

The Commission agrees that this proposal is reasonable. It also makes the rule consistent throughout. Accordingly, the attached Appendix reflects this change.

IX. Section 466.110(f) Supplemental Review

A. Petitioners

Petitioners propose to add a Section allowing for Supplemental Review if a DG facility fails to meet one or more of the Level 2 screens. The proposed Supplemental Review replaces the rule's current "additional review" process. The proposed process

utilizes three technical screens to help guide the review: 1) Minimum Load Screen; 2) Voltage and Power Quality Screen; and 3) Safety and Reliability Screen. Proponents state that the proposed rule has a more structured and transparent "supplemental review" process intended to help utilities handle increasing volumes and penetrations of distributed generation efficiently without compromising the safety and reliability of their electrical systems.

Petitioners note that, under their proposal, the 15% of peak load screen remains as the technical screen for the initial Level 2 review and the determination of minimum load (the time of lowest usage on the relevant circuit) would only be required as circuits begin to see higher penetrations of distributed generation. If the utility is unable to make a reliable estimation of minimum load, however, it may use the 15% of peak limitation as a default, as long as it offers a written explanation of why calculating or estimating minimum load is not possible. Petitioners assert that the relevant measurement is actually minimum load rather than peak load and that minimum load is typically 30% of peak load. According to Petitioners, in the near term, Illinois utilities that may not be experiencing high penetrations will not encounter the need to determine minimum load and thus will have time to refine their process for making such an evaluation as penetration grows in their service territories.

The proposed 100% of minimum load screen recognizes that distributed generation systems that will cause the generation to exceed the minimum load on a circuit likely require further review. Petitioners state that the safety, reliability, and power quality screens that form the backbone of the supplemental review process, along with the provision of 30 business days for the application of the screens, provide the utilities with sufficient time and flexibility to evaluate how a proposed generator will interact with the system as long as it is below 100% of minimum load.

The proposed amendment also takes into account the type of generator seeking to interconnect. For solar PV systems, the proposed screen utilizes the daytime minimum load, instead of the absolute minimum load, to reflect that PV systems only generate during the daytime.

Petitioners state that the current rules and FERC's original SGIP included a 15% of peak load screen. At that time, the tools for measuring minimum load were not as common as today. The Petitioners note that California, Massachusetts and now FERC have adopted processes essentially identical to their proposal, relying on a 100% of minimum load penetration screen and two additional screens addressing safety, reliability, and power quality. FERC SGIP § 2.4. According to Petitioners, the greater deployment of SCADA and other smart grid technologies enable utilities to measure minimum load data on their circuits. In addition, the proposed language provides that if minimum load data is not available, a utility can estimate minimum load. If minimum load information is not available and cannot otherwise be determined, the generator would fail the screen.

In response to Ameren's statements regarding the Safety and Reliability Screen's reference to the distance to the substation, the Petitioners state that this is often cited as a key technical criteria. Indeed, the factors listed in the Petitioners' proposed Part 466.110(f)(4)(C)(iii) screen are only to be given "due consideration" and the screen also

allows the utility to consider "other factors," as needed, to determine "potential impacts to safety and reliability in applying this screen.

There are three main system risks, Petitioners state, that are often raised in the context of higher penetrations of DG: unintentional islanding, voltage control, and protection coordination. The additional supplemental review screens ("Voltage and Power Quality Screen" and "Safety and Reliability Screen") provide utilities with flexibility to identify circumstances where high penetrations on a particular circuit may require further study.

In response to objections to the 100% of minimum load screen, Proponents argue that it would be inappropriate to pick and choose some revisions to implement and some to ignore. They point to FERC's statement that "the three screens in the supplemental review are designed to strike a balance between handling the increased volume of interconnection requests and penetrations of small generators and maintaining the safety and reliability of the electric systems." FERC Order 792 at ¶ 141. Proponents assert that adopting one or more of these screens without the other(s) could disrupt this balance and result in an interconnection review process that no longer promotes maximum efficiency while also maintaining safety and reliability. Also, Petitioners recognize that while the supplemental review screens will allow a greater number of systems to interconnect without proceeding through a lengthy study process, Petitioners assert that experience from other states proves that the supplemental review screens serve their function of identifying which projects require further, more rigorous study and by no means result in approval of every application.

In response to Staff's proposal to remove all of the listed factors in the Safety and Reliability Screen the Petitioners clarify that the purpose of this list is to improve the clarity of the process for the generators and to demonstrate that there are a number of legitimate factors that the utility may consider in evaluating the safety and reliability of the proposed interconnection. Petitioners note that these are not the only factors that can be considered as the proposal states that "due consideration" shall be given to those "and other factors" in determining impacts to safety and reliability.

Petitioners note that they have cited several technical studies from national laboratories to demonstrate that a 100% of minimum load screen is safe and appropriate, and Petitioners point out that utilities do not provide credible citations to any research suggesting otherwise. Petitioners reiterate that the application of the 100% of minimum load screen, when applied in conjunction with the safety, reliability and power quality screens, is sufficiently protective. For that reason, Petitioners maintain that it is important not to view the minimum load screen in a vacuum.

B. ComEd

ComEd is not opposed to the Supplemental Review process, but does not consider the "100% of minimum line load" criterion sufficient to ensure the safe and reliable operation of the area electric power distribution system under all potential operational scenarios. ComEd explains that the use of 100% of minimum line load as the basic standard for evaluation for supplemental review does not ensure adequate protection against the possibility of islanding. Islanding occurs when a portion of an electric power system remains energized after being disconnected from the larger electric power

system. The recognized way to avoid islanding, according to ComEd, is to ensure that the amount of distributed generation on a circuit is always significantly less than the load on the circuit. ComEd also argues that 100% of minimum line load as the basic standard of evaluation for supplemental review simply does not ensure adequate protection against voltage and frequency issues for other customers.

ComEd recommends that the current 15% of maximum load criterion be retained. That criterion, which is used in the utility industry and is recognized in IEEE 1547 Standard for Interconnection Distributed Resource with Electric Power Systems, is based on an engineering assumption that it is approximately equal to 30% of the minimum line load. ComEd states that the minimum line load can be difficult to quantify because the electric distribution system is a dynamic system in a constant state of change, and real-time SCADA load metering may not be available in all locales. ComEd asserts that the existing 15% criterion, which has been long recognized as a good sound engineering approach throughout the industry, provides an appropriate margin of safety and has been used for many years to successfully prevent unintentional islanding.

In response to the Petitioners' statement that unintentional islanding is unlikely thanks to the built-in anti-islanding functionality in most inverters, ComEd states that this suggestion is the subject of considerable ongoing industry research by groups such as the National Electric Energy Testing, Research and Application Center ("NEETRAC") and the Electric Power Research Institute ("EPRI"). ComEd argues that until that research is completed and standards and requirements for operating in that fashion are established, it is unclear whether the built-in anti-islanding protection commonly used in existing designs would operate as intended or whether the inverters may be able to hold themselves up and sustain an island. Because this question has not been resolved, ComEd asserts that a change to 100% of minimum load would be premature.

ComEd explains that anti-islanding systems, which are built into most modern inverters, are designed to detect circuit interruptions and prevent the circuit from being energized. ComEd asserts, however, that anti-islanding systems have been shown to fail in instances where multiple detection technology are used within the same system. Moreover, as the penetration levels of distributed generation increase, the likelihood of multiple detection technologies on the same system increases. Also, multiple types of distributed generation may also be a factor in the reliability of anti-islanding systems.

Further, ComEd states that recent steps toward modernization of its system and improvement in system reliability have focused on maintaining voltage and frequency through reduction in connected load while frequency of load transfers is increased. Adopting a 100% minimum line segment load screen, on the other hand, may require ComEd to maintain minimum circuit segment loads and therefore could prevent load transfers in instances where reliability improvement and improved outage restoration capability would dictate that load transfers occur. This proposal, according to ComEd, would improperly limit ComEd's ability and flexibility in the design of its electrical system.

C. Ameren

Ameren asserts that this extra process is unnecessary. Also, Ameren states that the proposed Supplemental Review process would make purposeless the existing technical standards that utilities apply to distributed generation installations, greatly

increase the risk of unintentional islanding and would create a rubber-stamp approval process by restricting the data that utilities can require for reviewing a distributed generation application. Specifically, Ameren complains that Section 466.110(f)(4)(A), the proposed 100% of minimum load screen, is contrary to the IEEE standard of 15% of maximum load.

In the proposed Supplemental Review, Ameren notes that Petitioners propose the adoption of a new method to calculate minimum load when a full year of data does not exist, which would be based on an estimate from the standard load profiles for various customer classes. Ameren argues that when meter data is not available, any calculation of the minimum load is an estimate regardless of the tool or technique used to develop that estimate. Ameren suggests that the proposal is nothing more than an attempt to replace the utility's current estimation methodology which is based upon standards set by the IEEE with the methodology of an organization dedicated to the promotion of distributed generation resources. Ameren states that the proposal lacks evidentiary support and will prevent utilities from conducting meaningful review of distributed generation facilities until distributed generation penetration on a circuit is overwhelming.

Also, Ameren complains that Section 466.110(f)(4)(A)(iii) prevents a utility from considering any existing generation on the affected portion of the circuit when determining whether the proposed 100% generation-to-load threshold has been exceeded. Ameren also notes that the distance from the substation reference in Section 466.110(f)(4)(C)(iii) has little or no applicability in an environment where distribution circuits are routinely designed to be fed from multiple substations.

Ameren argues that the ultimate effect of these proposals is that virtually every DG application would be approved for installation regardless of its likely impact on the distribution system.

D. Staff

Staff notes that Section 466.110(c)(3), which explains the options for facilities that do not meet the Level 2 screens, does not reference the Supplemental Review option, it just sends facilities straight to Level 4.

Also, in subsection (f)(4)(B), Staff proposes deleting the reference to IEEE Standard 1453, while also providing a full cite to IEEE Standard 519. Staff also reads Part 466.110(c)(3) to not give customers a choice whether to proceed with a Level 4 study, rather it appears to just direct the utility to provide the study which is paid for by customers.

In Part 466.110(f)(4)(C), for the supplemental review, Staff proposes deleting all of the listed factors that the utility must consider because it is not necessary for the rule to list factors that the utility must consider to determine whether the project passes the Safety and Reliability Screen.

In its reply comments, Staff explains that the Supplemental Review is an additional study process within the Level 2 expedited review wherein an applicant that fails the technical screens can pay the EDC to take another look using different criteria. Staff is concerned that the Supplemental Review proposal transforms a straight-forward and logical Level 2 expedited process that uses universally accepted screens into a much

more complicated process that relies upon different screens that are not universally accepted.

In particular, Staff does not find the Petitioners' argument in support of using a 100% minimum load screen within its proposed supplemental review to avoid islanding to be convincing and Staff finds the proposal to be premature. Staff states that it is not convinced that minimum loading on distribution circuits over time is consistent enough for EDCs to use a supplemental review screen that sets a 100% of minimum load threshold. In addition, Staff notes that radial distribution circuits do not utilize the same protection schemes as the looped transmission systems under FERC jurisdiction, and Staff is not convinced that all aspects of FERC's SGIP are directly transferrable to distribution systems in Illinois. The fact that some utilities or jurisdictions may have adopted a practice of using 100% minimum load as the level to avoid islanding does not, by itself, make that practice a "best practice" for EDCs in Illinois.

Staff recommends that because the parties do not agree on the screens to be used for the proposed supplemental review, the proposed supplemental review process, at least for now, should be excluded from Part 466. Staff states that in practical terms, the exclusion of the supplemental review from the Level 2 review would likely have little effect on applicants because Section 466.110(f) of the current rule provides for an additional review of the DG interconnection without requiring a Level 4 review. According to Staff, the existing provision has been working well, and it is not apparent to Staff that any change is needed at this time.

E. Commission Analysis and Conclusion

As an initial observation, the Commission finds the record on the issue to be particularly incomplete. As this is only the First Notice Order, further information must be provided as the rulemaking continues. Specific questions are raised below, similar to the issues above, but the Commission emphasizes that any information that would useful to the Commission for making an informed decision should be provided, not merely the deficiencies noted herein.

The Proponents explain that the Supplemental Review is an additional study process within Level 2 wherein an applicant that fails the initial technical screens can pay the EDC to take another look using different criteria. The first screen under the Supplemental Review process looks at whether a distributed generator would bring the aggregate generation on a circuit up to 100% of the minimum load for that particular circuit. The question is whether this 100% of minimum load screen is sufficiently protective against islanding. The concern is that if the grid is down for some reason and if there is more distributed generation on a circuit than there is minimum load, then that circuit can remain energized and thus create a dangerous situation. Modern inverter based distributed generation systems are supposed to automatically shut down in the case of a grid failure. Notably FERC accepted the 100% of minimum load screen for its supplemental review and this screen also conforms with the studies presented for the Commission's review. The Commission adopts a modified version of the proposed Supplemental Review and finds that many of the objections are sufficiently addressed when the multiple screens are considered together. The 100% of minimum load is

appropriately considered in conjunction with the “Voltage and Power Quality Screen and the “Safety and Reliability Screen.”

As proposed, although it is not explained, it appears as though the 100% of minimum load could be based on actual data or an estimate. Indeed, Ameren complains that the proposed rule not only sets the screen at 100% of minimum load, but also allows an estimate of minimum load if the relevant data is not available. The Commission agrees that this inappropriate. With the introduction of smart meters throughout ComEd’s and Ameren’s territory, this controversial screen should only be used if the actual minimum load information is available. If actual minimum load data is not available, an applicant would fail the Supplemental Review screen. Perhaps the rule needs to be rewritten so that the Supplemental Review is not available unless the EDC has minimum load data. In other words, an applicant would be informed of the minimum load data before paying for the Supplemental Review. Without more information, however, it is not clear if that is an appropriate solution. The record is does not contain information regarding the measuring of minimum load. Ameren says they do not measure minimum load, but it also appears as though smart readers do, or at least are able to, measure minimum load. Is the minimum load data readily available if smart meters are installed on a circuit? What exactly is required and how much work goes into determining minimum load on a circuit that has been “modernized”.

Illinois ratepayers are paying for grid modernization and one of the benefits of this investment is supposed to be increased distributed generation. Besides providing information on minimum load, grid modernization also appears to impact distributed generation in other ways. ComEd hints at, but does not explain, how increased distributed generation will adversely affect grid modernization and raises concerns about load transfers and limiting flexibility in designing its electrical system. In reply comments, ComEd also alludes to possible voltage and frequency issues for other customers, but doesn’t explain. The Commission notes that as written, in the Supplemental Review process, it appears that if the voltage and power quality cannot be assured with the addition of an applicant’s distributed generation, then the generator would fail the Supplemental Review and would be sent to Level 4 review process. Thus, the screen would work and the grid would be protected.

For purposes of the First Notice Order, the Commission adopts the proposal of the Petitioners. In its Order 792, FERC adopts 100% of minimum load screen for its Supplemental Review. The Commission, with the evidence presented, finds this persuasive. The utilities may present information - a technical justification - for why Illinois should not follow the path suggested by FERC. This appears to be the trend and the utilities should explain why Illinois is unique.

Some questions that arose include: what types of generation have been considered under Level 2, what percentage are solar, etc.; are there circuits on either utility’s system that exceed the 15% of maximum load or 100% of minimum load with distributed generation; how many circuits are nearing these levels; what problems have utilities experienced on circuits with distributed generation; an explanation of radial circuits, looped circuits and circuits from multiple feeds and how this relates to the issues in this rulemaking; whether there have been any experiences with distributed generation

related islanding in Illinois; and what has been the experience with inverters shutting down or not shutting down when there is a grid failure?

Staff and Ameren seem to support leaving some form of the current process in place. In particular, Ameren notes that the current rules provide for an "additional review" under Level 2 and therefore there is no need for the "Supplemental Review". How often has the "additional review" process been used by applicants to either utility? How long is the process for the "additional review" on average?

The Commission notes that this is just the First Notice Order; with additional information the Commission may decide not to include the proposed Supplemental Review process. Based on the Commission's review, however, the Supplemental Review will standardize the review of applications resulting in a more transparent and fair review process. Also, although Illinois is not required to follow FERC on this issue, it does persuade the Commission that the utilities should provide a better explanation why Illinois should not be adopting this process as well.

X. kW v kVA Unit

A. Petitioners

Petitioners note that the current rules specify distributed generation system limitations in kVA, which is the unit used for the apparent power in an electrical circuit, rather than kW, which refers to a system's output power. The Petitioners propose using kW and MW, to be consistent with practices nationally, but based on workshop discussions, propose changing kVA to kW only in instances where the size identified is not fulfilling a purely technical requirement.

In reply comments, Petitioners accept ComEd's correction.

B. ComEd

ComEd opposes changing to kW in Section 466.90(c)(2)(b). ComEd states that having a customer who desires to interconnect to the ComEd system only provide the inverter rating in kW would require the utility to make an assumption of the power factor. Otherwise, ComEd does not oppose this amendment.

C. Commission Analysis and Conclusion

This proposal is reasonable and is not disputed. The Commission adopts the proposed amendment and they are reflected in the attached appendix. It appears as though there are other instances of kVA throughout the rule that have not been modified by Proponents; it is unclear whether this was intentional. See, for example, Part 466.100(a)(2), 466.100(a)(3) and 466.110(a)(7). The attached appendix attempts to follow the version of the rule attached to Proponents' reply comments for this issue.

XI. Findings and Ordering Paragraphs

The Commission, having considered the entire record and being fully advised in the premises, is of the opinion and finds that:

1) the Commission has jurisdiction over the subject matter herein;

2) the recitals of fact set forth in prefatory portion of this Order are supported by the record and are hereby adopted as findings of fact;

3) this proceeding is a rulemaking and should be conducted as such;

4) the proposed amendments to Rule 466, 83 Ill. Adm. Code 466, as reflected in the attached Appendix A, and the proposed amendment to Rule 467, 83 Ill. Adm. Code 467, as reflected in the attached Appendix B, should be submitted to the Secretary of State to begin the first notice period.

IT IS THEREFORE ORDERED by the Illinois Commerce Commission that the proposed amendments to Rule 466, 83 Ill. Adm. Code 466, as reflected in the attached Appendix A, and the proposed amendments to Rule 467, 83 Ill. Adm. Code 467, as reflected in the attached Appendix B, be submitted to the Secretary of State pursuant to Section 5-40 of the Illinois Administrative Procedure Act.

IT IS FURTHER ORDERED that this proceeding is a rulemaking and shall be conducted as such and not as a contested case.

IT IS FURTHER ORDERED that this Order is not final and is not subject to the Administrative Review Law.

DATED: March 4, 2015
BRIEFS ON EXCEPTIONS DUE: March 18, 2015
REPLY BRIEFS ON EXCEPTIONS DUE: March 25, 2015

Leslie D. Haynes,
Administrative Law Judge